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10/616,606	07/10/2003	Mario Schroeder	MSA 256	3460
7590 HORST KASPER 13 FOREST DRIVE WARREN, NJ 07059		04/13/2007	EXAMINER KAO, CHIH CHENG G	
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SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/616,606	SCHROEDER ET AL.
Examiner	Art Unit	
Chih-Cheng Glen Kao	2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 03 January 2007.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-9, 12-16 and 18-43 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) 12-16, 18, 20 and 40-42 is/are allowed.

6)  Claim(s) 25-39 and 43 is/are rejected.

7)  Claim(s) 1-9, 19 and 21-24 is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 03 September 2003 is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers filed under 35 U.S.C. 119 (a)-(d) based on an application filed in Germany on July 12, 2002 and filed in Europe on July 8, 2003. Applicant has not complied with the requirements of 37 CFR 1.63(c), since the oath, declaration or application data sheet does not acknowledge the filing of any foreign application. A new oath, declaration or application data sheet is required in the body of which the present application should be identified by application number and filing date.

### ***Claim Objections***

2. Claims 1-9, 19, 21-24, 31-33, 35-39; and 43 are objected to because of the following informalities, which appear to be minor draft errors including grammatical and/or lack of antecedent basis problems.

In the following format (location of objection; suggestion for correction), the following correction(s) may obviate the objection(s): (claim 1, lines 8-9; inserting --wherein-- after "measuring instrument,"), (claim 2, line 8; inserting --wherein-- after "measuring instrument,"), (claim 8, line 2; inserting --when-- before "a predefined target position"), (claim 19, line 20, "the actual of the structure"; inserting --position-- after "actual"), (claim 21, line 2, "the actual position"; replacing "the" with --an--), (claim 21, line 3; replacing "whereby" with --wherein--), (claim 31, line 3; deleting "is"), (claim 35, line 14, "are known or is"; deleting "is"), and (claim

43, lines 15-16, "measuring instrument; means for positioning"; inserting --and-- after the semi-colon).

Claims 3-9, 22-24, 32, 33, and 36-39 are objected to by virtue of their dependency. For purposes of examination, the claims have been treated as such. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 25-34 and 43 are rejected under 35 U.S.C. 102(e) as being anticipated by Zylka et al. (US 6490477).

4. Regarding claim 25, Zylka et al. discloses a device for determining an actual position of a structure of an object to be examined (col. 12, lines 29-31) in a coordinate system, with a CT scanner (col. 8, lines 14-16), necessarily having a first coordinate system, the CT coordinate system, related to said CT scanner (col. 3, lines 39-45) for transformations, and with a coordinate measuring instrument (MI) which is either a tactile or an optical coordinate measuring instrument, a multisensor coordinate measuring instrument (fig. 1, #9 and 41), or an ultrasonic coordinate measuring instrument, having a second coordinate system, the MI coordinate system, related to said coordinate measuring instrument (col. 3, lines 39-49, measured position of the

surgical instrument), wherein the CT scanner (fig. 2, #2 and 3) and the coordinate measuring instrument (fig. 2, #9) are integrated into one single device (fig. 2, #1).

Note that functional recitations, including wherein coordinates of the object to be examined are determined in the MI coordinate system, and a target position of the structure within the object to be examined is predefined, so that the target position is determined in the MI coordinate system, and the object to be examined is positioned in such a way that the target position of the structure comes to lie within a volume detected by the CT scanner, have not been given patentable weight because they are narrative in form. See MPEP 2114.

5. Regarding claim 26, functional recitations, including when a predefined target position of the structure is relative to at least three selected, non-co-linear points of the object to be examined, the object to be examined is positioned using the coordinate measuring instrument in such a way that at least a part of the object to be examined lies within the volume detected by the CT scanner and this part of the object to be examined contains the target position of the structure, have not been given patentable weight because they are narrative in form. See MPEP 2114.

6. Regarding claim 27, functional recitations, including wherein at a predefined maximum deviation of the target position from the actual position of the structure of the object to be examined, said object is positioned using the coordinate measuring instrument in such a way that the target position as well as the actual position of the structure lie within the volume detected by the CT scanner, have not been given patentable weight because they are narrative in form. See MPEP 2114.

7. Regarding claim 28, functional recitations, including wherein the actual position differs from the target position by a predefined tolerance deviation at most, so that the actual position lies within a tolerance volume whose edge is at a distance from the target position by the tolerance deviation at most, and the object to be examined is positioned using the coordinate measuring instrument in such a way that the tolerance volume lies completely within the volume detected by the CT scanner, have not been given patentable weight because they are narrative in form. See MPEP 2114.

8. Regarding claim 29, functional recitations, including wherein the tolerance volume is a sphere, a tolerance sphere, whose mid-point coincides with the target position and whose radius is predefined by an amount of the maximum deviation of the target position from the actual position of the structure, have not been given patentable weight because they are narrative in form. See MPEP 2114.

9. Regarding claim 30, functional recitations, including wherein the object to be examined is positioned using the coordinate measuring instrument in such a way that the volume detected by the CT scanner has, at most, an  $x$ -fold volume of the tolerance volume, wherein  $x$  is a predefinable number that is greater than 1, have not been given patentable weight because they are narrative in form. See MPEP 2114.

10. Regarding claim 31, functional recitations, including wherein a relative location and a relative orientation of the CT coordinate system relative to the MI coordinate system are predefined or are determined by means of calibration, have not been given patentable weight because they are narrative in form. See MPEP 2114.

11. Regarding claim 32, functional recitations, including wherein by means of the coordinate measuring instrument, a location of the at least three selected points of the object to be examined are determined relative to the MI coordinate system, the target position of the structure relative to the MI coordinate system is calculated using the determined locations obtained in step (i), and the target position of the structure is converted from the MI coordinate system to the CT coordinate system so that a location of the target position is determined in the CT coordinate system, have not been given patentable weight because they are narrative in form. See MPEP 2114.

12. Regarding claim 33, Zylka et al. further discloses a traveling mechanism (fig. 1, #21).

Also note that functional recitations, including wherein the object to be examined is positioned relative to the CT scanner by means of a traveling mechanism, using the target position of the structure obtained by means of step (iii) with respect to the CT coordinate system, in such a way that a tolerance volume and thus also the structure lie within the volume detected by the CT scanner, have not been given patentable weight because they are narrative in form. See MPEP 2114.

13. Regarding claim 34, functional recitations, including wherein by using the CT scanner, a three-dimensional digital CT image of a tolerance volume, including the structure, is created and stored as a CT data record, and the actual position of the structure in the CT coordinate system is determined on the basis of the CT data record, have not been given patentable weight because they are narrative in form. See MPEP 2114.

14. Regarding claim 43, Zylka et al. discloses a device for determining an actual position of a structure of an object to be examined (col. 12, lines 29-31) in a coordinate system comprising a CT scanner (col. 8, lines 14-16), necessarily having a first coordinate system, the CT coordinate system, related to said CT scanner (col. 3, lines 39-45), a coordinate measuring instrument (MI) which is either a tactile or an optical coordinate measuring instrument, a multisensor coordinate measuring instrument (fig. 1, #9 and 41), or an ultrasonic coordinate measuring instrument, having a second coordinate system, the MI coordinate system, related to said coordinate measuring instrument (col. 3, lines 39-49, measured position of the surgical instrument), wherein the CT scanner (fig. 2, #2 and 3) and the coordinate measuring instrument (fig. 2, #9) are integrated into one single device (fig. 2, #1), means for determining coordinates of the object to be examined in the MI coordinate system and connected to the coordinate measuring instrument (col. 3, lines 56-57), means for predefining a target position of the structure within the object to be examined connected to the coordinate measuring instrument (fig. 7, #202), means for determining the target position in the MI coordinate system connected to the coordinate measuring instrument (fig. 7, #203), and means for positioning the object to be examined in such

a way that the target position of the structure comes to lie within a volume detected by the CT scanner and connected to the CT scanner (fig. 7, #204).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 35-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zylka et al. as applied to claim 25 above, and further in view of Pfoh (US 5291402).

16. Regarding claim 35, Zylka et al. discloses a device as recited above. Zylka et al. further discloses wherein the CT scanner has an X-ray source (fig. 1, #2) and a position resolving detector (fig. 1, #3) having an active detector surface that is sensitive to radiation emitted by the X-ray source (fig. 1, #2), and wherein an image field of the CT scanner is necessarily defined by the size of the active detector surface (fig. 1, #3).

However, Zylka et al. fails to disclose a two-dimensional detector.

Pfoh teaches a two-dimensional detector (fig. 3, #44).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to modify the device of Zylka et al. with the detector of Pfoh, since one would have been motivated to make such a modification for reducing the effect of skew (col. 5, lines 60-66) as shown by Pfoh.

Also note that functional recitations, including wherein the target position of the structure, relative to at least three selected, non-co-linear points of the object to be examined, is predefined and the actual position differs from the target position by a tolerance deviation at most, so that the actual position lies within a tolerance volume whose edge is at a distance from the target position by the tolerance deviation at most, and a relative location and a relative orientation of the CT coordinate system relative to the MI coordinate system are known or are determined by means of calibration, wherein by means of the coordinate measuring instrument, a location of the at least three selected points of the object to be examined are determined relative to the MI coordinate system, the target position of the structure relative to the MI coordinate system is calculated from the determined locations, the target position of the structure is converted from the MI coordinate system to the CT coordinate system, so that the location thereof is determined in the CT coordinate system, a relative position of the object to be examined relative to the CT scanner is regulated by means of a traveling mechanism, using the target position of the structure relative to the CT coordinate system, in such a way that the tolerance volume and thus also the structure lie within the volume that is detected by the CT scanner, and the CT scanner creates a three-dimensional digital CT image of the tolerance volume, including the structure, and stores the three-dimensional digital CT image as a CT data record, so that the actual position as well as a shape of the structure is determined in the CT coordinate system on the basis of the CT data record, have not been given patentable weight because they are narrative in form. See MPEP 2114.

17. Regarding claim 36, functional recitations, including wherein the tolerance volume is a tolerance sphere, so that its radius is defined by the tolerance deviation and its mid-point is defined by the target position, have not been given patentable weight because they are narrative in form. See MPEP 2114.

18. Regarding claim 37, functional recitations, including wherein the CT scanner is regulated in such a way that a center of tolerance volume is located essentially in a center of the volume that is detected by the CT scanner, have not been given patentable weight because they are narrative in form. See MPEP 2114.

19. Regarding claim 38, functional recitations, including wherein the CT scanner is regulated in such a way that, with a centered projection of the tolerance volume with the X-ray source as a center of projection, the image field is completely filled by the projection of the tolerance volume onto the detector, have not been given patentable weight because they are narrative in form. See MPEP 2114.

20. Regarding claim 39, functional recitations, including wherein the CT scanner is regulated in such a way that, with a centered projection of the tolerance volume with the X-ray source as a center of projection, the smallest diameter of the projection of the tolerance volume onto the detector and the smallest diameter of the image field of the CT scanner are essentially equal in size, or the largest diameter of the projection of the tolerance volume onto the detector and the largest diameter of the image field of the CT scanner are essentially equal in size, or the largest

diameter of the projection of the tolerance volume onto the detector and the smallest diameter of the image field of the CT scanner are essentially equal in size, have not been given patentable weight because they are narrative in form. See MPEP 2114.

***Allowable Subject Matter***

21. Claims 1-9, 19, and 21-24 would be allowable if rewritten or amended to overcome the respective claim objections set forth in this Office action. Claims 12-16, 18, 20, and 40-42 are allowed. The following is a statement of reasons for the indication of allowable subject matter.

22. Regarding claim 1, prior art fails to disclose or fairly suggest a process, including wherein using a determination of step c), an object to be examined is positioned in such a way that a target position of a structure comes to lie within a volume detected by a CT scanner, further characterized in that, by using the CT scanner, a three-dimensional digital CT image of a tolerance volume, including the structure, is created and stored as a CT data record, and an actual position of the structure is determined in a CT coordinate system on the basis of the CT data record, in combination with all the limitations in the claim. Claims 3-7, 9, 23, and 24 contain allowable subject matter by virtue of their dependency.

23. Regarding claim 2, prior art fails to disclose or fairly suggest a process, including wherein using a determination of step c), an object to be examined is positioned in such a way that a target position of a structure comes to lie within an area that is detectable by a coordinate measuring instrument, further characterized in that, in addition to an actual position of the

structure, a shape of the structure is also determined on the basis of a CT image or a CT data record, in combination with all the limitations in the claim. Claims 8, 9, 23, and 24 contain allowable subject matter by virtue of their dependency.

24. Regarding claim 12, prior art fails to disclose of fairly suggest a process, including wherein using a determination of step c), an object to be examined is positioned in such a way that a target position of a structure comes to lie within an area that is detectable by a coordinate measuring instrument, further characterized in that, by using a CT scanner, a three-dimensional digital CT image of a tolerance volume, including the structure, is created and stored as a CT data record, and an actual position of the structure is determined in a CT coordinate system on the basis of the CT data record, in combination with all the limitations in the claim.

25. Regarding claim 13, prior art fails to disclose of fairly suggest a process, including wherein an object to be examined is positioned relative to a coordinate measuring instrument by means of a traveling mechanism, using a target position of a structure obtained by means of step (iii) with respect to an MI coordinate system, in such a way that a tolerance volume and thus also a structure lie within an area that is detectable by the coordinate measuring instrument, and using the coordinate measuring instrument, a three-dimensional digital image of a tolerance area, including the structure, is created and stored as an MI data record, and an actual position of the structure is determined in the MI coordinate system on the basis of the MI data record, in combination with all the limitations in the claim.

26. Regarding claim 14, prior art fails to disclose or fairly suggest a process, including wherein a relative position of an object to be examined is regulated with respect to a CT scanner by means of a traveling mechanism, using a target position of a structure obtained by means of step c) relative to a CT coordinate system, in such a way that a tolerance volume and thus also the structure lie within a volume that is detectable by the CT scanner, by means of the CT scanner, a three-dimensional digital CT image of the tolerance volume, including the structure, is created and stored as a CT data record, and an actual position of the structure is determined in the CT coordinate system on the basis of the CT data record, in combination with all the limitations in the claim. Claims 15, 16, and 18 contain allowable subject matter by virtue of their dependency.

27. Regarding claim 19, prior art fails to disclose or fairly suggest a process, including wherein using a determination of step c), an object to be examined is positioned in such a way that a target position of a structure comes to lie within a volume detected by the CT scanner, further characterized in that, in addition to an actual position of the structure, a shape of the structure is also determined on the basis of a CT image or a CT data record, in combination with all the limitations in the claim.

28. Regarding claim 20, prior art fails to disclose or fairly suggest a process, including wherein using a determination of step c), an object to be examined is positioned in such a way that a target position of a structure comes to lie within an area that is detectable by a coordinate

measuring instrument, further characterized in that the shape of the structure is determined on the basis of a CT image or a CT data record, in combination with all the limitations in the claim.

29. Regarding claim 21, prior art fails to disclose or fairly suggest a process, including wherein using a determination of step c), an object to be examined is positioned in such a way that a target position of a structure comes to lie within an area that is detectable by a coordinate measuring instrument, further characterized in that a position of at least three selected space points of a calibration object is determined with a CT scanner in a CT coordinate system as well as with the coordinate measuring instrument in an MI coordinate system, and a comparison of results obtained allows to determine a relative location and a relative orientation of the CT coordinate system relative to the MI coordinate system, in combination with all the limitations in the claim. Claim 22 contains allowable subject matter by virtue of their dependency.

30. Regarding claim 40, prior art fails to disclose or fairly suggest a process, including wherein using a determination of step c), an object to be examined is positioned in such a way that a target position of a structure comes to lie within a volume detected by a CT scanner, further characterized in that the shape of the structure is determined on the basis of a CT image or a CT data record, in combination with all the limitations in the claim.

31. Regarding claim 41, prior art fails to disclose or fairly suggest a process, including wherein using a determination of step c), an object to be examined is positioned in such a way that a target position of a structure comes to lie within a volume detected by a CT scanner,

further characterized in that a position of at least three selected space points of a calibration object is determined with the CT scanner in a CT coordinate system as well as with a coordinate measuring instrument in an MI coordinate system, and a comparison of results obtained allows to determine a relative location and a relative orientation of the CT coordinate system relative to the MI coordinate system, in combination with all the limitations in the claim. Claim 42 contains allowable subject matter by virtue of its dependency.

***Response to Arguments***

32. Applicant's arguments with respect to claim 43 have been considered but are moot in view of the new ground(s) of rejection. Applicant's arguments filed January 3, 2007, have been fully considered but they are not persuasive.

33. Regarding at least claim 25, Applicant argues that the functional recitations of claim 25 are real requirements, which are patentable over the art of record. The examiner disagrees. Referring to MPEP 2114, while features of an apparatus may be recited functionally, claims directed to the apparatus must be distinguished from the prior art in terms of structure rather than function. A claim containing a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus if the prior art apparatus teaches all the structural limitations. For example, in claim 25, the only structural limitations needed to perform the functional recitations are a coordinate measuring instrument for determining coordinates and a table for positioning the object to be

examined, which are both disclosed in Zykla et al. Since there are no structural differences distinguishing Zykla et al. from claim 25, the claim is not patentable over Zykla et al.

Applicant further argues that Zykla et al. fails to disclose a “volume detected by the CT scanner”. The examiner disagrees. As seen in column 12, lines 39-44, the CT scanner of Zykla et al. can operate in a helical fashion, which necessarily detects a volume, due to the relative displacement of the table and gantry as imaging occurs. Therefore, Zykla et al. does disclose a “volume detected by the CT scanner”.

Regarding at least claim 35, Applicant implies that the combination of Zylka et al. and Pfoh is not obvious, since the substitution of the two dimensional detector of Pfoh into Zylka et al. will do nothing due to the interface of Zylka et al. Applicant further argues that the substitution of the detector of Zylka et al. by the detector array of Pfoh will not work with the X-ray source of Zylka et al., since the X-ray source of Zylka et al. is laid out for a one dimensional detector. The examiner disagrees with this logic for supporting nonobviousness. When substituting the two dimensional detector of Phoh into Zylka et al., one of ordinary skill in the art would also substitute the interface and X-ray source of Pfoh into Zylka et al., so that the X-ray system will function for a two dimensional detector. Such corresponding modifications are obvious and will work. Therefore, the claim is not patentable over Zylka et al. and Pfoh.

Furthermore, Applicant argues that Zylka et al. and Pfoh do not teach anything about the functional limitations of claim 35 and that there are numerous features which are not suggested or taught by the references, thus implying that the claim is patentable over Zylka et al. and Pfoh. The examiner disagrees. Again, a claim containing a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed

apparatus from a prior art apparatus if the prior art apparatus teaches all the structural limitations. For example, in claim 35, there are no structural limitations of the device that directly correspond to "a tolerance volume". In other words, there is no physical component of the device that corresponds to "a tolerance volume". The recitations with such a term are only narrative in form and do not structurally distinguish the prior art from the claim, thus making the claim unpatentable. Furthermore, the feature of "a traveling mechanism" was already addressed with regards to claim 33.

In conclusion, Applicant's arguments are not persuasive, and the claims remain rejected.

*Conclusion*

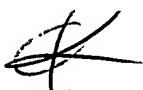
Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Cheng Glen Kao whose telephone number is (571) 272-2492. The examiner can normally be reached on M - F (9 am to 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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